

WHAT IS CLAIMED IS:

1 1. An endotracheal tube cleaning apparatus comprising:
2 a inflation device;
3 a balloon having a shaving ring with a squared edge; and,
4 a tube connecting said inflation device and said balloon which is capable of
5 transporting fluid from said inflation device to inflate said balloon.

1 2. The cleaning apparatus of claim 1 wherein said inflation device is a syringe.

1 3. The cleaning apparatus of claim 1 wherein said tube and said balloon are
2 formed from an elastomer.

1 4. The cleaning apparatus of claim 1 wherein said balloon is formed as a gap in
2 an elastomeric tube between two plugs within said tube, wherein one of said plugs has a hole
3 in it to allow inflating fluid to enter said balloon.

1 5. The cleaning apparatus of claim 1 further comprising a plurality of shaving
2 rings having squared edges.

1 6. The cleaning apparatus of claim 4 further comprising a wire connecting said
2 plugs.

1 7. The cleaning apparatus of claim 1 wherein said fluid is air.

1 8. An endotracheal tube cleaning apparatus comprising:
2 a inflation device;
3 a balloon formed as a gap in a elastomeric tube between two plugs, wherein
4 one of said plugs has a hole in it to allow inflating fluid to enter said balloon;
5 a plurality of elastomeric shaving rings affixed to said balloon wherein each of
6 said rings has at least one squared edge; and,
7 a tube connecting said inflation device and said balloon which is capable of
8 transporting fluid from said inflation device to inflate said balloon.

1 9. A process for removing mucus accumulations from the inside walls of an
2 endotracheal tube comprising the steps of: .

3 selecting a cleaning apparatus capable of shaving said mucus accumulations
4 off the inside walls of said endotracheal tube wherein said apparatus comprises an inflation
5 device, a balloon having a shaving ring with a squared edge, and a tube connecting said
6 inflation device and said balloon;
7 inserting said cleaning apparatus into said endotracheal tube;
8 using said inflation device to inflate the balloon of said cleaning apparatus so
9 that said shaving ring is pressed against the inside wall of said endotracheal tube;
10 pulling said cleaning apparatus out of said endotracheal tube while said
11 balloon is still inflated so that said shaving ring shaves said mucus accumulations off of the
12 inside walls of said endotracheal tube.

1 10. The process of claim 9 wherein said inflation device is a syringe.

1 11. The process of claim 9 wherein said balloon has a plurality of shaving
2 rings with squared edges.

1 12. The process of claim 9 wherein said balloon is formed from an elastomer.

1 13. The process of claim 9 wherein said endotracheal tube and said cleaning
2 apparatus have x-ray detectable markers which are used for alignment.

1 14. A process for removing mucus accumulations from the inside walls of an
2 endotracheal tube comprising the steps of:

3 selecting a cleaning apparatus capable of shaving said mucus accumulations
4 off the inside walls of said endotracheal tube wherein said apparatus comprises an syringe
5 inflation device, an elastomeric balloon having a plurality of shaving rings with squared
6 edges, a plastic tube connecting said inflation device and said balloon and two plugs adjacent
7 to said elastomeric balloon;

8 inserting said cleaning apparatus into said endotracheal tube;

9 using said syringe to inflate the balloon of said cleaning apparatus so that said
10 shaving rings are pressed against the inside wall of said endotracheal tube;

11 pulling said cleaning apparatus out of said endotracheal tube while said
12 balloon is still inflated so that said shaving rings shave said mucus accumulations off of the
13 inside walls of said endotracheal tube.
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